From: Casey, Carolyn
To: Kahn, Peter R.
Subject: FW: Cummings Soil Gas Sampling question
Date: Thursday, February 15, 2018 12:42:00 PM
Attachments: Subslab Sampling SOP (Sept2017).pdf

Peter, thanks for that last email you sent about the leak testing. It was very helpful. Guess I should be more familiar with our VI guidance. My bad, as pointed out by the samplers below. I added the red text and yellow highlights to their email response when I asked for more information on the helium leak testing. Guess I (b) (5) [redacted] ?

(b) (5) [redacted]

Thoughts? Am I just putting too much focus on an issue that really is not relevant?

Also, at (b) (5) [redacted] Any thoughts?

Thanks in advance for your continued help on this site.
Carolyn

From: Bruce Hoskins [mailto:BHoskins@FslAssociates.com]
Sent: Wednesday, February 14, 2018 10:06 AM
To: Casey, Carolyn <Casey.Carolyn@epa.gov>
Cc: 'Craig Ziady' <craig@cummings.com>
Subject: FW: Cummings Soil Gas Sampling question

Carolyn:

In response to your call yesterday and your request for more information on the helium leak testing that was performed at some of the soil gas points prior to sample collection, I have forwarded an email from our sampling subcontractor, EST Associates. Let me know if you have additional questions.

Bruce A. Hoskins, P.E., LSP

FSL Associates, Inc.
358 Chestnut Hill Avenue
Boston, MA 02135
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From: Karl Jensen [mailto:kjensen@estassociates.com]
Sent: Tuesday, February 13, 2018 2:07 PM
To: Bruce Hoskins
Subject: RE: Cummings Soil Gas Sampling question

Bruce,
I understand from you that EPA is looking for more information on the soil gas point leak detection and their concerns that it may have impacted soil gas sample collection. Fortunately, their concerns are unfounded. There is no way the injection of helium [not the issue] could compromise the sample. The whole point of using helium is that it is an inert gas and shouldn't affect the sample, even if it makes it into the SUMMA.

1) None of the sample points we were able to leak check actually leaked helium below the slab. They were all airtight. So no helium ever went below the slab, which means there's very little chance any helium made it into any samples in the first place.
2) We only use UHP (ultra high purity) helium provided by a reliable source which does not contain any trace gases.
3) We purge a few liters of air from each sample point after connecting the sample tubing and prior to opening the SUMMA, which both eliminates any ambient air from the sample train tubing AND any potential (and highly unlikely) leftover helium from below the slab.
4) This is the preferred [an option] method of leak detection and is recommended by **EPA.**

It may be helpful to refer your EPA contact to their own technical document.

" If a site team decides to proceed with sub-slab sampling, EPA recommends that leak-testing be performed to ensure the hole is properly sealed, for example through the use of a helium tracer gas shroud." -page 101, OSWER TECHNICAL GUIDE FOR ASSESSING AND MITIGATING THE VAPOR INTRUSION PATHWAY FROM SUBSURFACE VAPOR SOURCES TO INDOOR AIR, **US Environmental Protection Agency.**
https://www.epa.gov/sites/production/files/2015-09/documents/oswer-vapor-intrusion-technical-guide-final.pdf

I have attached the SOP [not inc in QAPP or SAP] that we created which references a different technical document issued by NH DES, but the technical guidance complies with EPA guidelines. EPA does not say whether a leak test should be done every time prior to sampling or not. I feel the point you made about building use is valid, and it is usually a good idea to leak check every time sampling occurs.

I hope this helps. If you have any more questions, let me know.

Thanks,
Karl